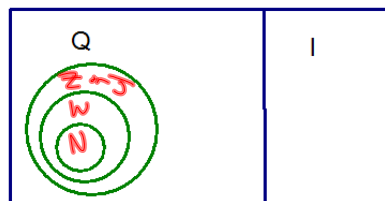


1.3-1.5 Notes (not in summer packet)

Symbols for Number Sets

Real \mathbb{R}
 Rational \mathbb{Q}
 Irrational \mathbb{I}
 Integer \mathbb{J} or \mathbb{Z}
 Whole \mathbb{W}
 Natural \mathbb{N}

Complete the Venn diagram: The rectangle represents all real numbers, \mathbb{R} .

More Properties

Reflexive $a \in \mathbb{R}$
 $a = a$

Symmetric $a, b \in \mathbb{R}$
 If $a = b$, then $b = a$

Transitive $a, b, c \in \mathbb{R}$
 If $a = b$ and $b = c$, then $a = c$.

More Properties

Substitution $a, b, c \in \mathbb{R}$
 If $a = b$ then a can replace b or b can replace a

Addition
 Subtraction
 Multiplication
 Division ($c \neq 0$)

If $a = b$ then $a + c = b + c$

Solve for the indicated variable.

$$F = \frac{mv^2}{r} \quad \text{for } m$$

$$rF = mv^2$$

$$\frac{rF}{v^2} = m$$

Solve for l.

$$A = lwh + lw^2$$

$$A = l(wh + w^2)$$

$$\frac{A}{(wh + w^2)} = l$$

$$S = \frac{rl - a}{r - 1} \quad \text{for } r$$

$$S(r - 1) = rl - a$$

$$Sr - S = rl - a$$

$$a - S = rl - Sr$$

$$a - S = r(l - S)$$

$$\frac{a - S}{l - S} = r$$

Notation $x > 19$

set-builder notation

$$\{x \mid x > 19\}$$

"The set of all numbers x , such that $x > 19$ "

interval notation

$$(19, +\infty)$$

$()$ open circle
 $[\]$ filled in circle

∞ always $()$

$$x \leq 5$$

$$(-\infty, 5] \quad \{x \mid x \leq 5\}$$

$$5 \leq x \leq 20$$

$$[5, 20]$$

HW

p15 #s 21-24, 28-35

p25 #s 35-40, 61,62

p31 #s 29, 35, 37, 39, 43

p37 #s 21-27odd (use interval notation)